

Remarks

Claims 1-12 are pending in the application.

Claim rejections

Section 102

Claim 1-5 and 7 were rejected under 35 USC 102(b) as being anticipated by Buchner et al. (DE 196 49 434 C1) ("Buchner"). The Applicant respectfully traverses. Buchner cannot support the asserted rejection for at least the reason that Buchner does not disclose "measuring a gas pressure at the anode; measuring a gas pressure at the cathode ... and determining an amount of cross-leak based on the measured gas pressure at the anode, the measured gas pressure at the cathode, and on a measured voltage of each cell," as recited in independent claim 1.

More specifically, in embodiments of the present invention, pressure measurement devices such as manometers 36 and 37 are used to measure pressure at the anode and cathode, respectively. This is described in the present specification at, for example, page 5, 4th paragraph. This may provide more accurate results. By contrast, Buchner teaches away from using pressure measurement devices, stating that "no measuring instruments as are used in fluid mechanics are necessary" See Buchner (English translation thereof) at page (Seite) 2, line 18.

Withdrawal of the asserted rejection is therefore respectfully requested.

Section 103

Claim 6 was rejected under 35 USC 103(a) as being unpatentable over Buchner in view of Shimanuki et al. (US 6,777,121) ("Shimanuki"). The Applicant respectfully traverses. As recognized by the Examiner, Buchner does not suggest introducing a cooling medium into a battery of the fuel cell; and changing a temperature of the cooling medium when measuring the voltage of each cell as recited in claim 6.

The Examiner cites Shimanuki as disclosing the features absent from Buchner. The Applicant respectfully disagrees. Shimanuki does not disclose changing a temperature of a cooling medium, but controlling a *flow rate* of a cooling medium for reducing pump consumption and for performing heat exchange with components

discharged a fuel cell. See Shimanuki, e.g. at col. 2, lines 6-11 and lines 58-61.

Therefore, there is furthermore no motivation to combine Buchner and Shimanuki.

Withdrawal of the asserted rejection is therefore respectfully requested.

Claims 8-11 were rejected under 35 USC 103(a) as being unpatentable over Buchner in view of Muchnic et al. (US 6,558,824) ("Muchnic"). The Applicant respectfully traverses. Like Buchner, Muchnic fails to disclose or suggest "measuring a gas pressure at the anode; measuring a gas pressure at the cathode ... and determining an amount of cross-leak based on the measured gas pressure at the anode, the measured gas pressure at the cathode, and on a measured voltage of each cell," as recited in independent claim 8. Consequently, claims 8-11 are allowable over the combination of Buchner and Muchnic.

Withdrawal of the asserted rejection is therefore respectfully requested.

Claim 12 was rejected under 35 USC 103(a) as being unpatentable over Buchner in view of Muchnic and Shimanuki. The Applicant respectfully traverses. None of the cited references suggests introducing a cooling medium into a battery of the fuel cell; and changing a temperature of the cooling medium when measuring the voltage of each cell as recited in claim 12. This was discussed previously in connection with Shimanuki, and Buchner and Muchnic are similarly deficient.


Conclusion

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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